

## REMARKS

Claims 1-7, 10-41 and 57-60 are pending in the application. In response to the Office Action, applicant amends the claims to add new claims 61-64.

In the present Final Office action claims 1-7, 10-14, 20, 21, 26-41 and 57-60 are again rejected under 35 U.S.C. 102 (b) as being anticipated by U.S. Patent 5,653,706 to Zavislan et al. Applicant respectfully traverses the rejection.

Claim 1 recites "an imaging subsystem that generates images of a region of the skin and automatically determines responsive to the images if the region comprises a feature on the skin to be treated and if so, a location of the feature in the region". Claim 1 also recites "a controller, that when a feature is located, controls the laser to radiate a pulse of laser light that is focused by the laser optics to a spot localized about the feature".

The Examiner submits that "Zavislan et al clearly teach that their invention provides 'an improved system for microsurgery which is **automatically operative both for visualization and for location of the laser beam at a treatment site ...** (col 2, lines 19-23)'" ( bold emphasis as in the Office Action).

As noted by the applicant in past responses, **nowhere does Zavislan teach automatically determining whether a skin region comprises a feature to be treated and if so, a location of the feature in the region.** The quoted excerpt from Zavislan proffered by the Examiner has nothing to do with automatically determining "if the region comprises a feature on the skin to be treated and if so, a location of the feature in the region". As the quote itself recites, it has to do with visualization and localization of *the laser beam* at a treatment site. In particular, as understood from Zavislan, col 4 lines 37-54, the word "automatic" in the excerpt refers to the automatic focusing of an image of the beam on a "visualization plane of a camera" (col 4 line 37), which shows also an image of the treatment site. The image of the beam and the treatment site allows a "treating physician" (col 4 line 47) to both see and *locate* the beam at a treatment site and thereby steer the beam using "beam steering device 28" (col 4 line 30) to a feature in the site to be treated. (See for example col 4 lines 37-54). Applicant submits that the Examiner has not established a prima facie case of anticipation by citing the excerpt in question.

With regard to the Examiner's drawing applicant's attention to MPEP 2144.04 III (AUTOMATING A MANUAL ACTIVITY), which cites in re Venner, that "broadly providing an automatic or mechanical means to replace a manual activity which accomplished the same result is not sufficient to distinguish over the prior art", **applicants submit that MPEP 2144.04 III is not**

a blanket denial of patentability of automating human activity. As the applicants have attested in the response to the last office action, there is a plethora of patents for devices and methods for automating human activity. A cursory search of US patents from 1976 to the present provided 52,086 patents that have the word "automatic" in their claims. Many of these claim devices that automate human activity. The following examples are illustrative.

US 6,892,94 for an "Automatic Prescription Drug Dispenser" claims

1. A pharmacy configuration comprising: a store having an enclosed pharmacy floor space that is secured against unauthorized entry wherein the pharmacy floor space includes a storage area for medicines; a medicine stock stored in the storage space wherein the medicine stock includes a variety of medications; and an *automatic* medication dispensing machine adapted to dispense labelled medications labeled with patient-specific information in response to a customer request, the *automatic* medication dispensing machine co-located with the pharmacy floor space and accessible to dispense labeled medications directly to pharmacy customers at least a portion of the operating hours of the store wherein the labeled medications are dispensed directly to the customers in the store outside the pharmacy floor space, and accessible to dispense labeled medications directly to a pharmacy service provider located within the secured floor space.

US 6,900,594 for "Methods and a Device for Automatically Switching On or Off The Illumination of a Vehicle" claims:

1. A method for *automatically* switching on the lighting of a vehicle, comprising the steps of: determining an average brightness  $H_{amb}$  in the environment of the vehicle; and switching the vehicle exterior lighting on, if brightness  $H_{amb}$  is less than or equal to a threshold value  $S_{Night}$  during a time interval  $T_{min,Night}$ .

and

20. A device for *automatically* switching on or switching off the exterior lighting of a vehicle comprising: a first light sensor determining brightness over a large area ahead of the vehicle; a second light sensor determining brightness in the direction of travel; the first light sensor determining the brightness  $H_1$  of incident light beams entering inside a first spot with a large cone angle; the second light sensor determining the brightness  $H_2$  of the light beams entering within a second spot with a small cone angle; the wherein longitudinal axis of the second spot extends horizontally and the wherein longitudinal axis of the first spot rises with respect to the horizontal; a third light sensor determining the brightness  $H_3$  of the light beams entering within a spot with a smaller cone angle than the second light sensor; the wherein

longitudinal axes of the second and third spots run coaxially; and a light control unit responsive to signals from the first, the second and the third light sensors for *automatically* switching on and off the exterior lighting of the vehicle.

From the above it must be realized that automating human activity can and in fact does give rise to patentable claims and that therefore in re Venner has a reach that falls far short of a total ban on claims drawn to automating human activity. In re Venner itself teaches the limitations of its reach. In re Venner does not cite automation per se as the reason for denying patentability. Patentability in re Venner was denied because of obviousness as expressed in the following quotes from the opinion in the case:

"However, we believe it to be settled rule that it is not invention to produce a device which is within the realm of performance of a skilled mechanic in the ordinary progress of producing a device required to effectuate a given result."

"Venner et al together with Nichols and Wagner patents show the automatic means to initiate withdrawal of a core from a position molding apparatus; this would preclude applicants from predicated patentability on this feature"

"In the instant case, we find all the elements of appellants combination in the prior art cited by Venner et al together with Waldie, Stern, Nichols and Wagner."

The statement regarding automation in re Venner "Furthermore, it is well established that it is not 'invention' to broadly provide a mechanical or automatic means to replace manual activity which has accomplished the same result" must be understood to teach that the mere provision of automation does not trump obviousness in providing patentability. In the context of the opinion, the use of the curious modifier "broadly" in the statement to modify "to provide mechanical or automatic means" indicates deference to obviousness. Applicant submits that the intent of the statement, and as a consequence in re Venner, is not to destroy patentability of new and unobvious "mechanical or automatic means to replace human manual activity" but to teach and reaffirm that in the absence of "unobviousness" automation, standing alone does not provide patentability.

Applicant submits that the Examiner has not provided a prima facie case for obviousness of the invention claimed in claim 1 of the application and that merely quoting in re Venner is not sufficient to sustain rejection of the claims in view of the strictures taught by in re Venner itself.

Applicant agrees with the remark made by the Examiner with regard to using a computer that "merely using a computer to automate a known process does not by itself impart obviousness to the invention" but traverse its applicability and that of the citation of *Dann v. Johnston*, 425 U.S.

219, 227-30, 189 USPQ 257, 261 (1976) that the Examiner marshals in support of his remark. As with respect to automation, there is no blanket denial of patentability of computer programs and there is a plethora of patents claiming computer programs that implement automation of human activity. Furthermore, similarly to in re Venner, in *Dann v. Johnston* obviousness was the issue and patentability was refused because of obviousness. As noted in the Headnotes to the case "Court finds no need to treat question of whether computer programs are patentable after concluding that applicant's system is unpatentable on obviousness grounds".

As with regard to the Examiner's arguments based on in re Venner, applicants reiterate that the Examiner has not provided a prima facie case for obviousness of the inventions claimed in claim 1 and that, merely noting *Dann v. Johnston* is not sufficient to sustain rejection of the claim.

Applicant's arguments made with regard to claim 1 apply equally well to independent claim 57 and that therefore rejection of the claim based on *Zavislan* or teachings from in re Venner or *Dann v. Johnston* is not tenable.

With regard to claim 3, the Examiner insists in contending that since *Zavislan* uses a tunable laser in spite of the fact that, as the applicant has brought to the Examiner's attention in the response to the previous office action, *Zavislan* specifically recites: "It is a still further object of the present invention to provide an improved microsurgery and especially dermatological surgery system using a laser beam ... thereby providing a single instrument using a **single wavelength laser beam** for different microsurgical and dermatological treatments" (col 2 lines 36-45).

The Examiner notes that "*Zavislan et al* use a single laser source which provides laser pulse in a wavelength range of between 700 to 1300 nm." On the basis of this sentence the Examiner concludes that "Hence, since their laser is operable to varying in wavelength over a given range, it is considered to be a tunable laser". As the applicant has pointed out in the past, having a wavelength in a given range is not synonymous with being tunable in the range. Is every laser that operates at a wavelength between 700 and 1300 nm a tunable laser? The answer is, of course, no and it must be realized that the Examiner's conclusion is neither supported by nor logically connected to the premise. As also noted in the past, the applicant has not found mention anywhere in *Zavislan* of either a tunable laser or a laser operable at varying wavelengths.

Applicant's arguments, which have been made in the past, have been repeated in the preceding paragraphs for clarity. The arguments have not been addressed and rebutted as required

by MPEP 707.07(f) and Examiner Note 7.37 and unless properly addressed and, if possible, rebutted, the arguments must be considered viable and submissions contrary thereto not cogent.

With regard to claim 13 applicant agrees that CCD video camera 48 is associated with circuitry that receives and processes signals ... to provide visual image of the desired feature", presumably on monitor 26. However claim 13 claims circuitry that processes signals to locate contrasted sub-regions in the imaged skin region to determine if the region comprises a feature to be treated. The circuitry provides processing that might or might not provide a visual image, but does provide processing to reach a determination as to whether the region comprises a feature to be treated – i.e. the circuitry is configured to come to provide a decision. Nowhere does Zavislan describe or allude to such circuitry, and such circuitry is neither conventional nor inherent in CCD video camera 48 as contended by the Examiner.

Claims 15-19 and 22-25 are again rejected by the Examiner under 35 U.S.C. 102 (b) as being anticipated by U.S. Patent 5,653,706 to Zavislan et al in view of U.S. Patent 5,437,290 to Bolger et al. Applicant respectfully traverses the rejection.

With regard to claim 15 applicant points out, as applicant has pointed out in the past, that the laser system taught by Zavislan does not locate features on the skin. Zavislan's laser system is a manually operated system and an operator of the laser system locates the features. It is further noted that features located by the laser system of the present application and by an operator of the Zavislan apparatus are natural features, which are generally irregular, different one from the other and not equally spaced. On the other hand the quadrature system taught by Bolger is used for automatically, optically monitoring movement of artificial, regularly-spaced, identical markings on a catheter. The Bolger quadrature system is not suitable for detecting natural, irregular features that are far from identical and equally spaced.

Therefore not only is there no motivation to combine the Bolger quadrature detection system for automatically monitoring artificial features with the manually operated Zavislan laser system, there is also no apparent way to do so to provide the inventions claimed in claims 15-19 and 22-25. Applicant therefore submits that Zavislan in view of Bolger cannot support a prima facie case of obviousness for the claims.

The Examiner has not addressed and rebutted the above argument in the past and therefore applicant submits that the argument still stands viable.

With regard to claim 36 the claim recites "a motor or actuator that rotates the objective lens system with an oscillatory motion ... so that the objective focal point moves back and forth


along a planar arc having a fixed length". The Examiner submits that "the actuator (focusing mechanism 69 that is coupled to focusing lens 68) further moves the lens back and forth and would provide a planar arc having a fixed length". The Examiner's remark regarding provision of a planar arc having a fixed length is not clear.

Applicant respectfully requests the Examiner to clarify what is provided with a planar arc having a fixed length and how this is done. As described in the text, the focusing mechanism 69 "sets the depth below the surface that the laser light is focused". It does not appear to generate oscillatory motion of anything and certainly not of the laser focal point as claimed in claim 36 of the present invention. Nor does it appear to move the focal point in a planar arc having a fixed length. It appears to move the focal point along a straight line parallel to the z-axis in order to control depth at which the laser light is focused.

New claim 61 is an independent claim that recites limitations recited in claims 1, 10 and 13. Claims 62 and 63 recite limitation of claims 15 and 16 respectively. Claim 64 recites a limitation recited by claim 36 and is supported by Figs. 1A, 2 and 4 and discussions thereof.

In view of the above, applicant submits that independent claims 1 and 57, and new claims 61-64 are not anticipated nor made obvious by Zavislan and that neither is patentability of the claims injured by either in re Venner or Dann v. Johnston. Dependent claims in the amended claim set are patentable, either through dependence on claims 1 or 57 or as a result of patentable material that they contain. An allowance is respectfully awaited.

Respectfully submitted,  
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